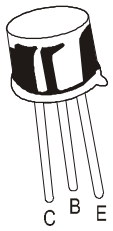
NPN SILICON PLANAR TRANSISTORS

2N5336 / 2N5337
2N5338 / 2N5339



TO-39
Metal Can Package

ABSOLUTE MAXIMUM RATINGS

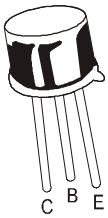
DESCRIPTION	SYMBOL	2N5336 / 2N5337	2N5338 / 2N5339	UNIT
Collector Base Voltage	V_{CBO}	80	100	V
Collector Emitter Voltage	V_{CEO}	80	100	V
Emitter Base Voltage	V_{EBO}	6.0	6.0	V
Collector Current Continuous	I_C	5.0	5.0	A
Base Current	I_B	1.0	1.0	A
Power Dissipation at T_a=25ºC	P_D	6.0	6.0	W
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +200		ºC
Thermal Resistance	Rth (j-c)	29		ºC/W

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION		MIN	MAX	UNIT
Collector Base Cut Off Current	I_{CBO}	V_{CB}= Rated V_{CBO}			10	mA
Collector Emitter Cut Off Current	I_{CEX}	V_{CE} = 75V, V_{EB} = 1.5V	2N5336/ 2N5337		10	mA
		V_{CE} = 90V, V_{EB} = 1.5V	2N5338/ 2N5339		10	mA
Collector Emitter Cut Off Current	I_{CEO}	V_{CE} = 75V	2N5336/ 2N5337		10	mA
		V_{CE} = 90V	2N5338/ 2N5339		10	mA
Emitter Base Cut Off Current	I_{EBO}	V_{BE}=6V			100	mA
Collector Emitter Voltage	V_{CEO}	I_C=50mA	2N5336/ 2N5337	80		V
			2N5338/ 2N5339	100		
Collector Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C=2A, I_B=0.2A			0.7	V
		I_C=5A, I_B=0.5A			1.2	V
Base Emitter Saturation Voltage	$V_{BE\ (sat)}$	I_C=2A, I_B=0.2A			1.2	V
		I_C=5A, I_B=0.5A			1.8	V
DC Current Gain	hFE	I_C=500mA, V_{CE}=2V	2N5336/ 2N5338	30		
			2N5337/ 2N5339	60		
		I_C=2A, V_{CE}=2V	2N5336/ 2N5338	30	120	
			2N5337/ 2N5339	60	240	
		I_C=5A, V_{CE}=2V	2N5336/ 2N5338	20		
			2N5337/ 2N5339	40		

NPN SILICON PLANAR TRANSISTORS

2N5336 / 2N5337
2N5338 / 2N5339



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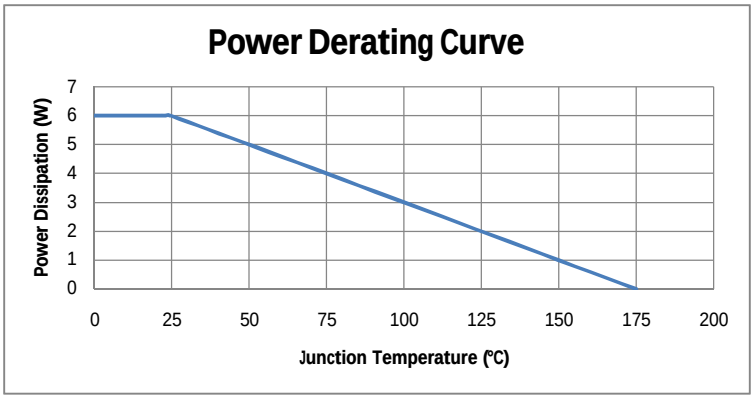
Metal Can Package

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise)

SMALL SIGNAL CHARACTERISTICS

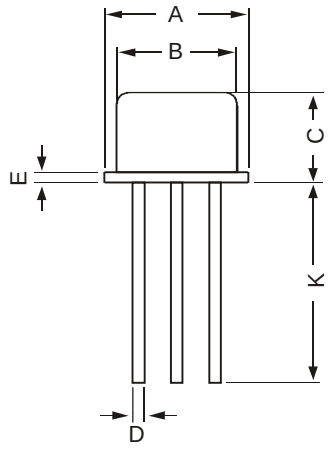
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Transition Frequency	f_T	V_{CE}=10V, I_C=0.5A, f=10MHz	30		MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=0.1MHz		250	pF
Input Capacitance	C_{ib}	V_{EB}=2V, I_C=0, f=0.1MHz		1000	pF
ON Time	t_{ON}	V_{CC} = 40V, I_C = 2A, I_{B1} = 0.2A		200	ns
Storage Time	t_s	V_{CC} = 40V, I_C = 2A, I_{B1} = I_{B2} = 0.2A		2	μs
Fall Time	t_f	V_{CC} = 40V, I_C = 2A, I_{B1} = I_{B2} = 0.2A		200	ns



2N5336 / 2N5337
2N5338 / 2N5339

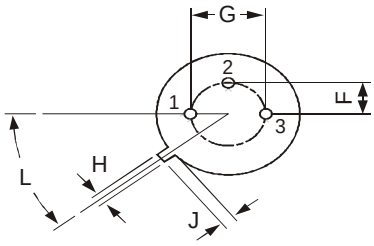
TO-39
Metal Can Package

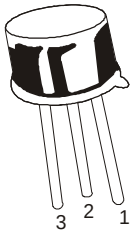
TO-39 Metal Can Package



All dimensions are in mm

DIM	MIN	MAX
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	—	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	—
L	42 DEG	48 DEG





PIN CONFIGURATION
1. EMITTER
2. BASE
3. COLLECTOR

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-39	500 pcs/polybag	540 gm/500 pcs	3" x 7.5" x 7.5"	20K	17" x 15" x 13.5"	32K	40 kgs

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.

2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Customer Notes

2N5336 / 2N5337
2N5338 / 2N5339

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Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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CDIL is a registered Trademark of
Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119
email@cdil.com www.cdil.com

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